

REMARKS

In accordance with the foregoing, the specification has been amended. Claims 1-41 and 49-56 are pending, with claims 1, 7, 10, 23, 34, 39, 49, and 51 being independent. Claims 1-6, 10-23, 26-30, 34-38, and 49-56 are under consideration as being directed to elected Invention I, with claims 1-6, 10-22, 34-38, 49, 50, and 52-56 being readable on elected Species A; claim 51 being generic to elected Species A and non-elected Species B; claims 26-30 of Species B being linking claims that link together the inventions of Species A and B; and claim 23 of Species B being the base claim of linking claims 26-30. Claims 7-9, 24, 25, 31-33, and 39-41 are withdrawn from consideration as being directed to elected invention I but being readable on non-elected Species B. Claims 4-6, 12-14, 17-22, 36-38, and 50 of Species A are linking claims that link together the inventions of Species A and B. No new matter is presented in this Amendment.

Interview Summary

The Interview Summary mailed June 26, 2009, for the personal interview conducted on June 23, 2009, is acknowledged. The Applicants' Statement of the Substance of the Interview required by the Interview Summary and MPEP 713.04 was already provided on pages 11-13 of the Amendment of June 24, 2009.

Request for Personal Interview, Termination of Prosecution, and Allowance of Application

MPEP 707.02 states as follows on MPEP page 700-115:

The supervisory patent examiners should impress their assistants with the fact that the shortest path to the final disposition of an application is by finding the best references on the first search and carefully applying them.

The supervisory patent examiners are expected to personally check on the pendency of every application which is up for the third or subsequent Office action with a view to finally concluding its prosecution.

Any application that has been pending five years should be carefully studied by the supervisory patent examiner and every effort should be made to terminate its prosecution. In order to accomplish this result, the application is to be considered "special" by the examiner.

The Office Action of November 23, 2009, is the tenth Office Action on the merits that has been issued in the present application without any Request for Continued Examination (RCE) having been filed. This does not count the two Office Actions of October 4, 2005, and March 10, 2006, in which the original Examiner and the current Examiner set forth restriction requirements and requirements for an election of species. Furthermore, original claims 1-6, 10-23, 26-30, 35-38, 49, and 50 that are under consideration have never been amended, while original claim 34 that is under consideration has been amended only once to correct a typographical error. Also, the present application was filed on November 24, 2003, and thus has been pending for more than six years. Accordingly, it is respectfully requested that the Examiner, Natalie K. Walford, and her supervisor, Supervisory Patent Examiner (SPE) Nimeshkumar D. Patel, work together to terminate prosecution and allow the application.

The above request was also made on page 13 of the Amendment of June 24, 2009, but the Examiner did not comply with this request and instead issued the Office Action of November 23, 2009. In light of this, the applicants hereby request a personal interview with the Examiner, Natalie K. Walford, and her supervisor, Supervisory Patent Examiner (SPE) Nimeshkumar D. Patel, in an effort to resolve all outstanding issues and place the application in condition for allowance.

The undersigned attorney, Douglas X. Rodriguez, will attempt to contact the Examiner to schedule an interview in the near future, but it is respectfully requested that the Examiner contact the attorney to schedule an interview before acting on the present Amendment should the Examiner be ready to act on the Amendment before an interview has been scheduled.

Allowable Subject Matter

Claims 12-14, 17-23, 26-30, and 36-38 have been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

However, claim 23 is an independent claim, and accordingly it is submitted that the correct status of claim 23 and claims 26-30 depending therefrom is that these claims are allowed. The applicants also pointed this out on page 14 of the Amendment of June 24, 2009,

but the Examiner nevertheless once again objected to claims 23 and 26-30 in the Office Action of November 23, 2009, instead of indicating that they are allowed.

Furthermore, claims 12-14, 17-22, and 36-38 have not been rewritten in independent form at this time as suggested by the Examiner because claims 10, 12, 15, 20, and 34 from which these claims directly or indirectly depend are also considered to be allowable for at least the reasons discussed below.

Request for Human English Translation of Nakagawara

In rejecting claims 3, 11, 16, and 35 over the prior art, the Examiner has relied on a machine English translation of Nakagawara et al. (Nakagawara) (JP 2002-60927). However, this machine English translation is virtually incomprehensible in many parts. Accordingly, should the Examiner continue to rely on Nakagawara, it is respectfully requested that the Examiner obtain a human English translation of Nakagawara from the Translations Branch of the Scientific and Technical Information Center (STIC) of the U.S. Patent and Trademark Office pursuant to MPEP 901.05(d) (see MPEP page 900-21) and MPEP 901.06(a)(IV)(D) (see MPEP pages 900-24 and 900-25).

The above request was also made on page 15 of the Amendment of June 24, 2009, but the Examiner did not comply with this request in the Office Action of November 23, 2009.

Furthermore, should the Examiner rely on any other foreign-language reference in any future Office Action, it is respectfully requested that the Examiner obtain a human English translation of the foreign language reference before issuing the future Office Action, and provide a copy of the human English translation with the future Office Action.

Claim Rejections Under 35 USC 102

Claims 1, 2, 4-6, 10, 15, 34, and 49-56 have been rejected under 35 USC 102(b) as being anticipated by Himeshima et al. (Himeshima) (U.S. Patent Application Publication No. 2001/0004469). This rejection is respectfully traversed.

However, Himeshima (referred to as Himeshima '469 in this discussion) is basically the same reference as Himeshima et al. (Himeshima '439) (U.S. Patent No. 6,469,439) relied on by

the Examiner in the rejection in the Office Action of October 31, 2007. Himeshima '469 is a publication of Application No. 09/331,083. Himeshima '439 issued from Application No. 09/811,406, which is a division of Application No. 09/331,083. The drawings of the two references are identical. The Examiner withdrew the rejection based on Himeshima '439 set forth in the Office Action of October 31, 2007, in response to the arguments in the Request for Reconsideration of January 28, 2008. In light of this, it is not understood why the Examiner has relied on the essentially identical reference of Himeshima '469 in the Office Action of November 23, 2009.

Furthermore, the Examiner has relied on particular interpretations of Himeshima in explaining the rejection. However, should the Examiner change her position in response to the arguments presented below and rely on different interpretations of Himeshima in the next Office Action, it is submitted that the Examiner cannot make the next Office Action final because these different interpretations will in effect be new grounds of rejection that were not necessitated by this Amendment because none of the claims have been amended in this Amendment.

Independent Claim 1

It is submitted that Himeshima does not disclose or suggest the following features of independent claim 1:

at least one mask unit, comprising:
a plurality of main apertures, and
a plurality of first dummy apertures formed adjacent
to outermost ones of the main apertures in a direction in which
tension is applied to the evaporation mask.

The Examiner states as follows:

Regarding claim 1, Himeshima discloses an evaporation mask in figure 35 formed of a thin film (item 31), wherein the evaporation mask is drawn taut by application of tension (see FIG. 36e) and comprises: at least one mask unit, comprising: a plurality of main apertures (item 32), and a plurality of first dummy apertures (item 38) formed adjacent to outermost ones of the main apertures in a direction in which tension is applied to the evaporation mask (see FIG. 36e).

However, FIGS. 35 and 36 show two different masks, and it is not clear from the explanation of the rejection whether the Examiner realizes this is the case. FIG. 35 shows a method of making a mask for patterning the emitting layer 6 shown in FIGS. 1-3 of Himeshima, while FIG. 36 shows a method of making a mask for patterning the second electrodes 8 shown in FIGS. 1-3 of Himeshima.

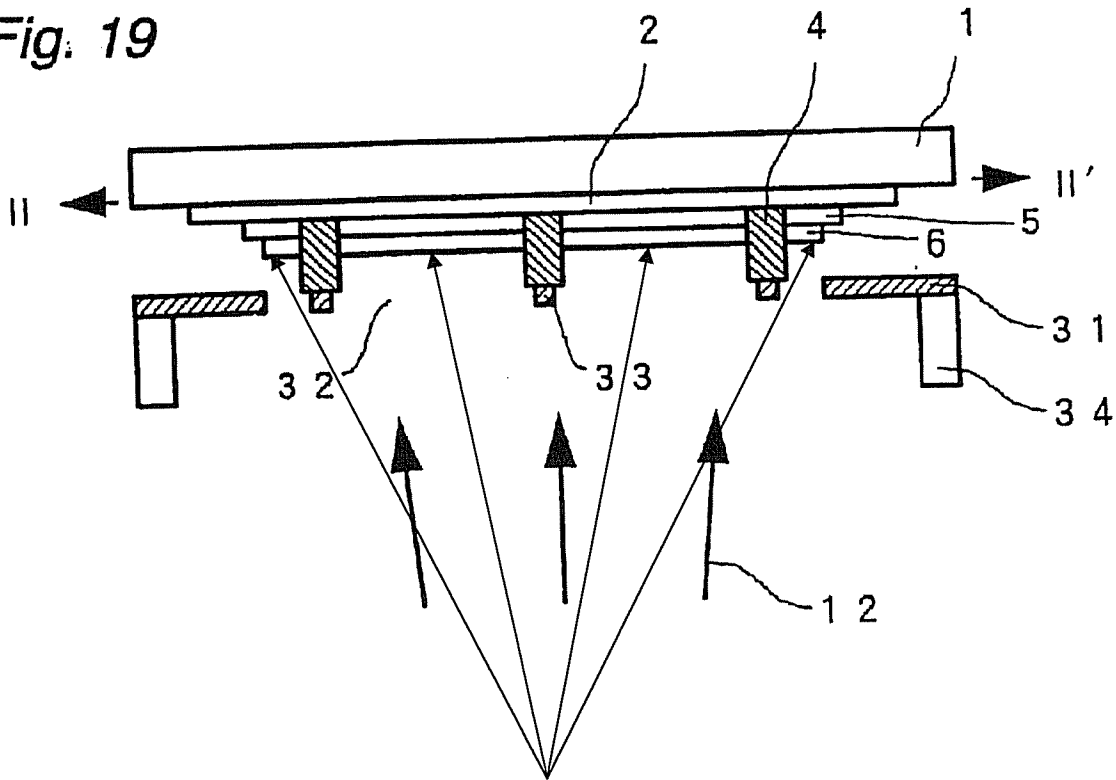
Furthermore, although the Examiner considers the margin of meshes 38 in FIG. 35 of Himeshima to correspond to the "first dummy apertures" in claim 1, the margin of meshes 38 is cut off during fabrication of the mask in FIG. 35, such that the finished mask does not have "first dummy apertures" as recited in claim 1, as can be seen from paragraph [0110] of Himeshima, which reads as follows (emphasis added):

[0110] The method for producing the shadow mask for the emitting layer is described below. At first, Ni—Co alloy was precipitated on a mother substrate by electroforming, to form a sheet with a margin of meshes 38 connected around a mask portion 31 as shown in FIG. 35. Then, while the sheet was tensioned by using the margin of meshes, the mask portion was overlaid on a frame, and both were fastened using an adhesive. Finally, the margin of meshes extending beyond the frame was cut off, to produce a shadow mask with high flatness for the emitting layer.

Furthermore, it is submitted that there is no basis whatsoever in Himeshima for some of the apertures 32 in FIGS. 35 and 36 to be considered to correspond to the main apertures recited in claim 1, while others of the apertures 32 to be considered to correspond to the first dummy apertures recited in claim 1, which is the position the Examiner took on page 2 of the Office Action of October 31, 2007.

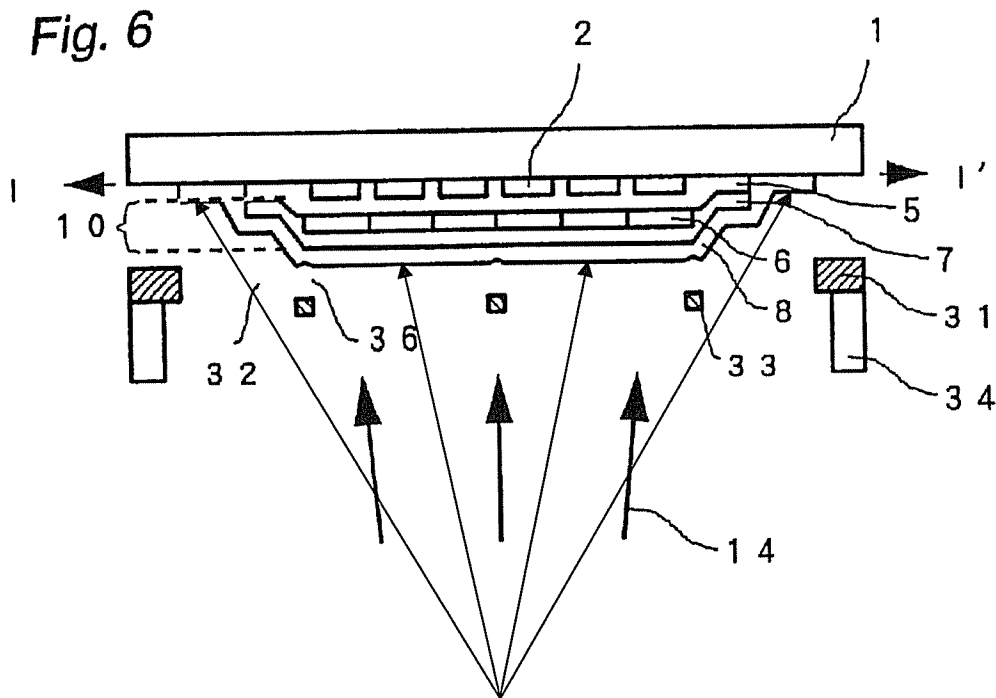
FIGS. 17-19 of Himeshima show the method of patterning the emitting layer 6 using the mask in FIG. 35 of Himeshima. As can be seen from the following marked-up copy of FIG. 19, the luminescent material 12 is deposited on Himeshima's organic electroluminescent device through all of the apertures 32 in the mask shown in FIGS. 17 and 35 to pattern the emitting layer 6:

Fig. 19



Luminescent material 12 deposited through all apertures 32 to pattern emitting layer 6

FIGS. 4-7 of Himeshima show the method of patterning the second electrodes 8 using the mask in FIG. 36 of Himeshima. As can be seen from the following marked-up copy of FIG. 6, the second electrode material 14 is deposited on Himeshima's organic electroluminescent device through all of the apertures 32 in the mask shown in FIGS. 4 and 36 to pattern the second electrodes 8:



Second electrode material 14 deposited through all apertures 32 to pattern second electrodes 8

It is not seen where anything whatsoever in Himeshima indicates that Himeshima considers there to be any differences between any of the apertures 32, or between any of the areas of the luminescent material 12 that are deposited through the apertures 32 using the mask shown in FIGS. 17 and 35, or between any of the areas of the second electrode material 14 that are deposited through the apertures 32 of the mask shown in FIGS. 4 and 36. Accordingly, it is submitted that there is no basis whatsoever in Himeshima for some of the apertures 32 to be considered to correspond to the main apertures recited in claim 1, while others of the apertures 32 to be considered to correspond to the first dummy apertures recited in claim 1. Rather, it is submitted any rejection based on such a position would be based solely on an impermissible hindsight reconstruction of the invention arrived at by reading the applicants' disclosure.

Dependent Claim 2

It is submitted that Himeshima does not disclose or suggest the following features of dependent claim 2:

wherein the main apertures form an effective deposition area, and the first dummy apertures form an ineffective deposition area.

The Examiner states as follows:

Regarding claim 2, Himeshima discloses the evaporation mask of claim 1, wherein the main apertures form an effective deposition area (see FIG. 35), and the first dummy apertures form an ineffective deposition area (see FIG. 35).

However, as discussed above, the margin of meshes 38 in FIG. 35 of Himeshima that the Examiner considers to correspond to the "first dummy apertures" in claim 2 is cut off during fabrication of the mask in FIG. 35, such that the finished mask does not have "first dummy apertures [that] form an ineffective deposition area" as recited in claim 2.

Dependent Claim 4

It is submitted that Himeshima does not disclose or suggest the following features of dependent claim 4:

at least two mask units, and further comprising a plurality of second dummy apertures formed outside and adjacent to the outermost mask units in the direction in which tension is applied to the evaporation mask.

The Examiner states as follows:

Regarding claim 4, Himeshima discloses the evaporation mask of claim 2, comprising at least two mask units (items 32, see two rows), and further comprising a plurality of second dummy apertures (item 38) formed outside and adjacent to the outermost mask units in the direction in which tension is applied to the evaporation mask (see FIG. 35 and paragraph 110).

However, it is submitted that the apertures 32 in FIG. 35 of Himeshima are part of a single mask unit that is used to form a single organic electroluminescent device, such as the organic electroluminescent device shown in FIG. 1 of Himeshima. Accordingly, it is submitted that Himeshima does not disclose or suggest "at least two mask units" as recited in claim 4.

Furthermore, as discussed above, the margin of meshes 38 in FIG. 35 of Himeshima that the Examiner considers to correspond to the "second dummy apertures" in claim 4 is cut off during fabrication of the mask in FIG. 35, such that the finished mask does not have "a plurality

of second dummy apertures formed outside and adjacent to the outermost mask units in the direction in which tension is applied to the evaporation mask" as recited in claim 4.

Furthermore, it is submitted that the Examiner's position that the margin of meshes 38 in FIG. 35 of Himeshima corresponds to the "second dummy apertures" in claim 4 is inconsistent with the Examiner's position that the margin of meshes 38 in FIG. 35 of Himeshima corresponds to the "first dummy apertures" in claim 1 from which claim 4 indirectly depends.

Dependent Claim 5

It is submitted that Himeshima does not disclose or suggest the following feature of dependent claim 5:

wherein the second dummy apertures are formed outside the effective deposition areas where the mask units are formed.

The Examiner states as follows:

Regarding claim 5, Himeshima discloses the evaporation mask of claim 4, wherein the second dummy apertures are formed outside the effective deposition areas where the mask units are formed (see FIG. 35).

However, as discussed above, the margin of meshes 38 in FIG. 35 of Himeshima that the Examiner considers to correspond to the "second dummy apertures" in claim 5 is cut off during fabrication of the mask in FIG. 35, such that the finished mask does not have the feature "wherein the second dummy apertures are formed outside the effective deposition areas where the mask units are formed" recited in claim 5.

Dependent Claim 6

It is submitted that Himeshima does not disclose or suggest the following feature of dependent claim 6:

wherein at least one of the second dummy apertures is formed parallel to the main apertures of the mask units, and at least another one of the second dummy apertures is formed perpendicular to the main apertures.

The Examiner states as follows:

Regarding claim 6, Himeshima discloses the evaporation mask of claim 4, wherein at least one of the second dummy apertures is formed parallel to the main apertures of the mask units (see FIG. 35), and at least another one of the second dummy apertures is formed perpendicular to the main apertures (see FIG. 35).

However, as discussed above, the margin of meshes 38 in FIG. 35 of Himeshima that the Examiner considers to correspond to the "second dummy apertures" in claim 6 is cut off during fabrication of the mask in FIG. 35, such that the finished mask does not have the feature "wherein at least one of the second dummy apertures is formed parallel to the main apertures of the mask units, and at least another one of the second dummy apertures is formed perpendicular to the main apertures" recited in claim 6.

Furthermore, the meshes 38 in FIG. 35 of Himeshima appear to be circular holes, and accordingly it is not seen how some of the meshes 38 can be considered to be formed parallel to the apertures 32 that the Examiner considers to correspond to the "main apertures" recited in claim 6, while other ones of the meshes 38 are considered to be formed perpendicular to the apertures 32.

Independent Claim 10

It is submitted that Himeshima does not disclose or suggest the following features of independent claim 10 for at least the same reasons discussed above that Himeshima does not disclose or suggest the same features of claim 1:

at least one mask unit, the mask unit comprising a plurality of main apertures and a plurality of first dummy apertures formed adjacent to outermost ones of the main apertures in a direction in which tension is applied to the evaporation mask.

Furthermore, it is submitted that Himeshima does not disclose or suggest the following feature of claim 10:

forming a first dummy pattern area outside the effective luminescent area through the first dummy apertures.

The Examiner states as follows:

Regarding claim 10, Himeshima discloses . . . forming a first dummy pattern area outside the effective luminescent area through the first dummy apertures (see FIG. 35).

However, as discussed above, the margin of meshes 38 in FIG. 35 of Himeshima that the Examiner considers to correspond to the "first dummy apertures" in claim 10 is cut off during fabrication of the mask in FIG. 35, such that the finished mask is not used to "form[] a first dummy pattern area outside the effective luminescent area through the first dummy apertures" as recited in claim 10 as can be seen from FIGS. 17-19 of Himeshima, which show the method of patterning the emitting layer 6 using the mask in FIG. 35 of Himeshima.

Dependent claim 15

It is submitted that Himeshima does not disclose or suggest the following feature of dependent claim 15 for at least the same reasons discussed above that Himeshima does not disclose or suggest the similar feature of claim 10:

a second dummy pattern area is formed outside the effective luminescent area through the first dummy apertures.

Independent claim 34

It is submitted that Himeshima does not disclose or suggest the following features of independent claim 34 for at least the same reasons discussed above that Himeshima does not disclose or suggest the similar features of claim 1:

a plurality of main apertures and a plurality of first dummy apertures formed adjacent to outermost ones of the main apertures in a direction in which tension is applied to the evaporation mask.

Independent Claim 49

It is submitted that Himeshima does not disclose or suggest the following features of independent claim 49 for at least the same reasons discussed above that Himeshima does not disclose or suggest the similar features of claim 1:

at least one mask unit comprising:
at least one main aperture, and
at least one first dummy aperture formed adjacent
to an outermost at least one main aperture in a direction in which
tension is applied to the evaporation mask.

Dependent Claim 50

It is submitted that Himeshima does not disclose or suggest the following feature of dependent claim 50 for at least the same reasons discussed above that Himeshima does not disclose or suggest the similar features of claim 4:

at least one second dummy aperture formed outside and adjacent
to the outermost at least one mask unit in the direction in which
tension is applied to the evaporation mask.

Independent claim 51

It is submitted that Himeshima does not disclose or suggest the following features of independent claim 51 for at least the same reasons discussed above that Himeshima does not disclose or suggest the similar features of claim 1:

A mask unit for an evaporation mask, comprising:
a main aperture; and
a dummy aperture.

Furthermore, it is submitted that Himeshima does not disclose or suggest the following feature of claim 51:

wherein the dummy aperture is deformed when a tension is
applied to the evaporation mask in a direction perpendicular to a
longitudinal direction of the main aperture and a longitudinal
direction of the dummy aperture, thereby minimizing a deformation
of the main aperture by the tension applied to the evaporation
mask.

The Examiner states as follows:

Regarding claim 51, Himeshima discloses . . . wherein the
dummy aperture is deformed when a tension is applied to the

evaporation mask in a direction perpendicular to a longitudinal direction of the main aperture and a longitudinal direction of the dummy aperture (see FIG. 36e), thereby minimizing a deformation of the main aperture by the tension applied to the evaporation mask (paragraphs 81 and 110).

Paragraph [0081] of Himeshima relied on by the Examiner states as follows in pertinent part (emphasis added):

[0081] The emitting layer is patterned as described below. The shadow mask used is shown in FIG. 17. The mask portion 31 has apertures 32 formed to correspond to the respective luminescent regions of the emitting layer, and to prevent the deformation of the apertures, reinforcing lines 33 are formed on the same plane as the mask portion, to cross the apertures for preventing the deformation of the apertures.

Thus, in Himeshima, it is the reinforcing lines 33 in FIG. 36e of Himeshima that prevent deformation of any of the apertures 32 that the Examiner considers to correspond to the "main aperture" recited in claim 51, rather than any of the meshes 38 that the Examiner considers to correspond to the "dummy aperture" recited in claim 51.

Conclusion—Claim Rejections Under 35 USC 102

For at least the foregoing reasons, it is respectfully requested that the rejection of claims 1, 2, 4-6, 10, 15, 34, and 49-56 (i.e., claims 1, 2, 4-6, 10, 15, 34, and 49-51 discussed above and claims 52-56 depending from claims 1, 10, 34, 49, and 51) under 35 USC 102(b) as being anticipated by Himeshima be withdrawn.

Claim Rejections Under 35 USC 103

Claims 3, 11, 16, and 35 have been rejected under 35 USC 103(a) as being unpatentable over Himeshima in view of Nakagawara et al. (Nakagawara) (JP 2002-60927) cited in the Information Disclosure Statement of August 29, 2005, with the Examiner presumably relying on the machine English translation of Nakagawara provided with the Office Action of June 29, 2006. This rejection is respectfully traversed.

Although the propriety of this rejection is not conceded, it is submitted that claims 3, 11, 16, and 35 are patentable over Himeshima and Nakagawara for at least the same reasons discussed above that claims 1, 10, and 34 from which claims 3, 11, 16, and 35 directly or indirectly depend are patentable over Himeshima.

For at least the foregoing reasons, it is respectfully requested that the rejection of claims 3, 11, 16, and 35 under 35 USC 103(a) as being unpatentable over Himeshima in view of Nakagawara be withdrawn.

Rejoinder of the Invention of Non-Elected Species B

Since claim 51 which is generic to elected Species A and non-elected Species B is allowable for the reasons discussed above; since claims 4-6, 12-14, 17-22, 36-38, and 50 of Species A which are linking claims that link together the inventions of Species A and B are allowable for the reasons discussed above; since claims 26-30 of Species B which are linking claims that link together the inventions of Species A and B are allowable for the reasons discussed above; and since claim 23 of Species B is allowable for the reasons discussed above, it is submitted that the applicants are entitled to rejoinder of the invention of non-elected Species B pursuant to 37 CFR 1.141(a) and MPEP 821.04(a). Accordingly, it is respectfully requested that the requirement for an election of species be withdrawn, and that claims 7-9, 24, 25, 31-33, and 39-41, which are currently withdrawn from consideration as being readable on non-elected Species B, be examined on the merits.

Conclusion

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

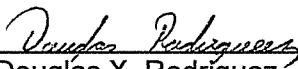
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with the filing of this paper, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

STEIN MCEWEN, LLP

Date: 1/28/10

By: 
Douglas X. Rodriguez
Registration No. 47,269

1400 Eye St., NW
Suite 300
Washington, D.C. 20005
Telephone: (202) 216-9505
Facsimile: (202) 216-9510